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ANALYZING PATIENT MEDICAL RESUME CODING'S COMPLETENESS AND ACCURACY ON THE AMOUNT OF INA-**CBG's CLAIMS**

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PAPER INFO		ABSTRACT		
Received: June		Background: The figure for completing medical records of 100% has not yet		
2022		been achieved which is the standard for completing hospital medical records		
Revised: June		after completion of service according to the Minister of Health of the		
2022		Republic of Indonesia No. 129/MENKES/SK/II/2008, and the importance of		
Approved: 2022	June	service costs, this case study of breast cancer patients with operation valueted to analyze the causes of that problem.		
		Aim: The research object was to analyze the completeness and accuracy of the coding of medical resumes for breast cancer patients with surgery on the amount of INA-CBGs claims at Dharmais Cancer Hospital in 2019.		
		Method: This study research is a mix method, with qualitative and quantitative approaches. The qualitative approach was carried out by in-depth		
		interviews, while the quantitative approach was carried out by reviewing the documents to be tested for suitability using the chi square method. The documents were inquired from Dharmais Cancer Hospital.		
		Findings: The results showed the incompleteness fulfillment of medical resumes was highest. The secondary diagnosis of 30.23%, supporting examinations 27.91%, physical examinations and procedures/actions		
		23.26%, and identity of 4.65% of 43 cases were reviewed. Inaccuracy rate of primary diagnosis coding 90,7%, procedure 76,7%, secondary diagnosis 30,2%. Incomplete and inaccurate coding affects the final INA-CBG's rate grouping results and is the cause of the difference in claims of Rp.		
KEYWOI	RDS	194,089,500.00 than it should be. completeness of medical resume, coding accuracy, INA-CBG's claims, breast cancer, Social Security Administering Body (BPJS)		

INTRODUCTION

The government's attention to the health and its quality for the citizens can be seen in the Constitution 1945 Article 28 H paragraph (1) which reads "Everyone has the right to live in physical and mental well-being, to live and have a good and healthy life and the right to obtain health services". Apart from being stated in the 1945 Constitution, the government's attention can be seen in the vision and mission of the Long-Term Development Plan for the Health Sector 2005-2025, namely that the community is expected to have the ability to reach quality health services and also receive health insurance, that is, the community gets protection in meeting their basic health needs. In the implementation of the Health Insurance Program, the Minister of Health makes a standard tariff for health services at health facilities. This health service rate standard is made in the form of a system called INA-CBGs (Indonesia Case Base Groups). INA-CBG is a payment system with a "package" system, based on the patient's illness. Hospitals will receive payment based on the INA CBGs rate which is the average cost spent by a group of diagnoses. The Social Security Administering Body (BPJS) for Health as a legal



entity established by the government as the organizer of the National Health Insurance Program (JKN) and other related parties regarding the INA-CBG payment method in administering Health Insurance.

From the data above, it can be seen that the reasons for returning the most claim files were confirmation of medical resumes and coding of 57.27%. It could be interpreted that the completeness of the medical resume and the accuracy of the coding were the biggest reasons for the reduction in Dharmais Cancer Hospital income. The figure for completing medical records of 100% has not yet been achieved which is the standard for completing hospital medical records after completion of service according to the Minister of Health of the Republic of Indonesia No. 129/MENKES/SK/II/2008, and the importance of diagnosis based on ICD-10 as one of the variables for calculating health service costs. This case study was conducted to analyze the causes of the problem. This case study was carried out by looking at how complete the patient's medical resume at Dharmais Cancer Hospital, whether the contents of the medical resume are in accordance with the existing medical record files and how to fill them according to standards and see what factors cause problems with completeness and the accuracy of coding the medical resume.

METHOD

This study research is using a mix method, qualitative and quantitative approaches. The qualitative approach was carried out by in-depth interviews, while the quantitative approach was carried out by reviewing the documents to be tested for suitability using the chi square method. The documents used were from the coding of medical resumes for breast cancer patients with surgery on the amount of INA-CBGs claims at Dharmais Cancer Hospital in 2019. The analysis used was univariate analysis.

Hypothesis

H₁: There is a relationship between the quantity of medical resume completeness figures and the quality of the suitability of the main diagnosis coding to the amount of claims based on INA CBG's.

H₂: there is a relationship between the quantity of medical resume completeness figures and the quality of the suitability of secondary diagnosis coding to the amount of claims based on INA CBG's.

H₃: there is a relationship between the quantity of medical resume completeness figures and the quality of the suitability of the action coding on the amount of claims based on INA CBG's.

RESULTS AND DISCUSSION

Table 1. Informant Characteristic

No	Age	Education	Work Period	Position
1	39	S2 MARS	18 years	Claim Coordinator
				Head Section of Data Coding and
2	51	S2 M. Kes	8 years	Storage
3	25	D3 Medical Record	4 years	Coder

4	46	D4 Medical Record	26 years	Verificator
5	49	S2 M. Si	26 years	Case Manager
6	32	S1 Medical	9 months	General Practicioner
7	34	S1 Medical	7 years	General Practicioner
8	28	S1 Medical	3 months	General Practicioner
9	47	Specialist Doctor	7 years	Specialist Doctor
10	42	Specialist Doctor	7 years	Specialist Doctor

Source: Primary Data, 2020

Input

Human Resource

1) Human Resource Knowledge: Based on the results of the study, the knowledge of all informants including the DPJP, understood the importance of the role of medical resumes in the JKN era. The informants were of the opinion that a complete medical resume starting from the primary diagnosis, secondary diagnosis, following therapy or treatment, as well as actions/procedures given to patients is the basis for generating INA-CBG rates which will be a source of hospital income. For DPJP and doctors guarding the room, filling out a complete medical resume is an obligation after completing providing services to patients. However, from the DPJP and the doctor guarding the room, the researcher analyzed that filling out medical resumes was more to the aspect of quantity, namely filling in important points in the medical resume form. Meanwhile, the complete knowledge of medical resumes according to the management, in this case the claims coordinator, then the case manager and coder and verifier that the complete resume is not only from the aspect of quantity, it is enough to only be filled, but must also pay attention to quality aspects of the medical resume itself such as the suitability of the diagnosis, therapy given, and procedures/actions performed.

Research conducted by Paulina et al (2016) reported that doctors' knowledge in filling out medical resumes must be in line with knowledge of the usefulness of medical resumes themselves. If only the doctor knows that filling out a complete medical resume, both in terms of quantity and quality, will affect the amount of the INA-CBG's claim value or tariff, the doctor will fill out a complete medical resume. Poor documentation in medical records can reduce the quality of the code (Huber et al., 2018). Maryati (2014) in her research reports that doctors with good medical record knowledge can fill out a resume well too, and vice versa, doctors with insufficient knowledge of medical records, so filling in complete medical records is also lacking. According to Munthe (2018) that medical resumes must be of high quality, worthy of claims, and less likely to postpone the payment of claims. Because it is complete, it is not enough to reduce the return of claim files from BPJS, but the contents must also be accurate and in accordance with the ICD code. A medical resume that is complete with an ICD code suitable for diagnosis and procedure is a major factor in determining the amount of the claim value and if this is achieved, the return or rejection of the claim file can be minimized (Hodges, 2002). The results of research conducted by Noor et al. (2014) stated that the lack of knowledge and attitudes of doctors about the benefits of

- the accuracy of filling in the ICD resulted in a low accuracy of filling in the ICD which had an impact on the amount of the claim value. While at the Dharmais Cancer Hospital, the doctor is not required to complete the diagnosis code or procedure on the medical resume.
- 2) Human Resource Training: Regarding the training, Dharmais Cancer Hospital has conducted training on fulfillment a complete medical resume at the time of reviewing the clinical pathway and coding but apparently not all doctors can participate in the training. As for the doctor on duty, there has never been any training on filling medical resumes according to the ICD. The doctor in charge of the room tries to complete the medical resume by relying on the information obtained from the socialization of the medical resume filling system, which makes the doctor in charge of the room complete the medical resume based only on the quantity side. Noor et al. (2014) in his research also stated that the limited time for doctors because they provide more services to patients, it is necessary to carry out effective training and not take a long time. The training is expected so that the DPJP and the doctor in charge of the room can fill out medical resumes correctly and according to the ICD based on INA CBG's.

The coder has also received coding training. Farzandipour's research (2011) reports that coders who are experienced and have received training have less error rates in coding when compared to coders whose experience and training are still lacking. This needs to be considered by the hospital, considering that since the JKN era, the coder has been the "entrance" for hospital revenues. For verifiers, both medical verifiers and medical record verifiers have also received training. Hospitals must be equipped with certified doctors and coders so that they are able to provide diagnostic codes and procedures of good quality (Pongpirul et al., 2011). Munthe's research (2018) reports that it needs training or socialization or workshops on a regular basis and updates related to filling out the completeness of medical resumes and compliance with the ICD which involves all related parties, starting from the doctor on duty, DPJP, coder, and verifier so that it no longer occurs. Error in interpreting.

3) Human Resource Behavior and Workload: Research conducted by Pepo & Yulia (2015), another factor related to the completeness of filling out a medical resume, namely workload. DPJP always fills out patient resumes after the patient is declared allowed to go home, and some have even started filling in a few points while the patient is still in treatment. However, sometimes the DPJP filled out the resume incomplete, more often than not filling out the main diagnoses and actions. This is due to the high number of JKN patients in the hospital. Dharmais Cancer. For this reason, the job of filling out a medical resume is assisted by a doctor to guard the room. In the Case Manager Handbook issued by the Hospital Accreditation Committee (KARS), it is stated that the role of the case manager or patient service manager is to facilitate patient care needs, optimize patient-focused services and optimize the reimbursement process, in this case the process of submitting claims to BPJS of Health, but Case Manager at Dharmais Hospital for Cancer is actually not at all involved in checking the completeness of the medical resume.

Inpatient coders always double-check the coding of primary diagnoses, secondary diagnoses, and actions on the medical resume with the ICD according to INA CBG's.

The workload for the care coders is felt to be excessive due to a lack of human resources, so that the coders are often overtime. In terms of verifying claim files, the number of verifiers is felt to be insufficient considering the verifiers who still have to overtime, because the number of verifiers is not proportional to the number of inpatient claim files that must be verified every day.

Funding

From the funding aspect, the research results show that the Collateral Patient Control Installation as the unit implementing service claim billing to BPJS of Health does not hold a special allocation to support the completeness of filling out medical resumes. However, in terms of IT systems, there is full support in terms of funding. This can also be seen from how SIMRS continues to innovate and get better. From HR, the funding can be seen from the overtime payment for employees. Setyabudi's research (2011) reports that the completeness of medical resumes is also influenced by factors of salary and staff overtime payment.

In accordance with government regulations, Dharmais Cancer Hospital uses a remuneration system and until now has not implemented a reward and punishment system related to the completeness of the contents of the medical resume. The application of a reward and punishment system is one way to maintain commitment in completing medical resume contents (Nurfadhilah, 2017). Sarwanti (2014) in her research states the compensation factor is the most dominant one related to the completeness of a medical resume. To motivate doctors, it is better if the completeness of this medical resume is included in the doctor's performance which can be counted as points from the doctor's remuneration.

Standard Procedure Operational (SPO)

To support the completeness of filling out medical records and medical resumes, Dharmais Cancer Hospital already has an SPO. There is an SPO which provides an explanation of the detailed and detailed activity procedures that will make it easier to carry out duties and responsibilities (Setyabudi, 2011). DPJP and doctors guarding the room have received socialization regarding SPO filling out medical resumes. Koder has also received socialization regarding SPO coding for medical diagnosis and treatment. Likewise for the verifier, the SPO regarding the flow of verification of invoice files has been well socialized. Munthe (2018) states that ideally, to better understand a job, socialization of the SPO related to the job should be carried out.

However, there are differences between the existing SPO and the procedures that have been carried out so far in the process of making a medical resume. The procedure in which the DPJP should complete all the fields on the medical resume form, which in fact often the DPJP only fills in the diagnosis and action columns which are then completed by the doctor on duty. Another procedure that differs is the point where the nurse and the head of the inpatient ward are tasked with reminding the DPJP if the DPJP does not immediately write a medical resume. In fact, so far the doctor has been on duty to the room that has done this and is felt to be quite effective in reducing the number of incomplete medical resumes.

Facilities and Infrastructure

The availability of facilities and infrastructure both from the contents of the electronic medical resume is sufficient. The DPJP and the doctor on duty assume that what is on the medical resume represents the need for information regarding the patient's medical history. For the purposes of billing claims to BPJS of Health, claims, coders, and verifiers assess the medical resume form as complete, the most important thing is that all point columns are filled in completely. Reinke (2014) reports that the implementation of electronic medical resumes can improve the timeliness of completing medical resumes. Sakaguchi (2014) in his research also reports that the successful use of electronic medical resumes is that they can improve their quality, timeliness and completeness. To support the smooth running of work, the availability of computers for the DPJP, doctors on duty, coders, verifiers, and officers at the Guarantee Patient Control Installation are felt to be sufficient.

SIMRS

The existence of SIMRS in Dharmais Cancer Hospital is integrated where coders simply do the coding in the SIMPEL application and it is automatically integrated with the INA-CBG E-Claim application version 5.2 from the Ministry of Health. In addition, SIMRS has accommodated the need for data from supporting examination results such as radiology, laboratory, and anatomical pathology as well as being accessible to view details of actions that have been received by patients but it is not automatically integrated. Information technology in hospitals is useful for integrating all service information and hospital management (Apriyantini, 2018). SIMRS is currently a necessity in hospitals to serve administrative and clinical functions that will directly improve service quality. Pongpirul, et al (2011) in their research also stated that the use of software, coders with sufficient quality and quantity plays an important role in the coding process.

Process

Recording and Inspection

Recording of medical resumes has been carried out by specialist doctors as the doctor in charge of the patient directly assisted by the doctor on duty in the process of completing the medical resume. The DPJP has fully understood the obligation to fill out a medical resume, where the medical resume is a summary of outgoing patients which is a resume of the patient's medical history from initial entry to discharge. The DPJP filling out medical resumes is only limited to the quantity aspect, where most of them only fill in the main diagnosis and action fields. The rest who checks and completes it is the doctor on duty.

The obstacle faced by the doctor guarding the room in filling out the medical resume is in terms of coding the diagnosis and action because the doctor in charge of the room has never received this training and also if the patient receives joint care or a cancer work team patient where the doctor in charge of the room has to do more. Check medical records before helping to complete a medical resume. Soong et al. (2016) reported in his research that patients treated by more than one clinician made clinicians limited in accessing medical resumes, thereby reducing the quality of information provided. The function of doctor who keeps in charge the room also takes over the task of the case manager at the same time is considered not optimal because the main function of the doctor in charge of the room is patient service, while the

function of the case manager is more to the process of assessment, planning, facilitation, advocacy through collaboration with patients, families, and ariff ic l providing care so that it is expected to produce the expected results of care (Komite Akreditasi Rumah Sakit, 2016).

Inspection and Coding

After the doctor in charge of the room completes the examination and completes the contents of the medical resume according to the contents of the medical record, then the inpatient coder re-checks the diagnosis code and procedures/actions according to the ICD. The ICD currently used is ICD 10 and ICD 9 CM. The disease coding process was carried out using the SIMRS facility in Dharmais Cancer Hospital which has been integrated with the E-Claim application version 5.2 from the Ministry of Health. Likewise, the electronic book for ICD codes has SIMRS installed. The coder as the correct coder is the one responsible for the accuracy of the code for the diagnosis and action that has been determined by the doctor and if there is something that is unclear or incomplete, before the code is set, it needs to be communicated first to the doctor who enforces the diagnosis (Wuryaningsih et al., 2011).

So far, in Dharmais Cancer Hospital requires fulfillment a disease code or action/procedure on a medical resume. Although several DPJPs had received training on coding, it was only limited to coding simulations, not understanding the ICD. This is in line with research conducted by Noor et al. (2014) that although almost all doctors have attended training on JKN and ICD, only a few understand and understand the meaning and importance of ICD accuracy or accuracy by doctors. So it is not uncommon for the verifier to have to reopen the medical record to see the suitability of the contents of the medical resume with the medical record. In accordance with the opinion of McCall (2014) states that verifiers must review medical records before coding and not only rely on medical resumes. Ideally, according to Pongpirul (2011), a medical resume should really be filled out by a doctor who treats patients to be used as a gold standard to see that the code writing done by the coder is correct. Still finding diagnoses that did not receive therapy resulted in the coder committing omit code, namely deleting the code. In line with Leppert (2014) in his study, he reported that the coded diagnosis must meet criteria; (1) require diagnostic examination, evaluation and or treatment; (2) increasing hospitalization days. The coding provisions which are also issued through a Circular of the Ministry of Health also make verifiers more careful and precise in coding diseases and actions/procedures.

Output

The results of the research on 43 samples of medical resumes with class 1 care as much as 48.84%, class 3 as much as 34.88% and class 2 as much as 16.28%. Since the JKN era, the occupancy rate of class 1 beds is more desirable than class 2 and class 3 according to the research results obtained.

From the results of the study, known that fulfillment of medical resumes based on incomplete identity is 4.65%, for inpatient indication that it has been completely filled in 100%, incomplete physical examination is 23.26%, and incomplete supporting examinations are 27.91%. When compared with previous research by Munthe (2018) in Dharmais Cancer Hospital shows an improvement in some parts because the research at that time found incomplete indications for admission to hospitalization of 91.1% and physical examination of 44.4% and supporting examinations of 8.9%.

Meanwhile, the primary diagnosis was 100% completely filled, the secondary diagnosis was 30.23% not completely filled, and the incomplete procedure/action was 23.26%. Incomplete secondary diagnosis and procedures/procedures are found in patients with comorbidities that can raise the INA CBG coding to levels II and III. This is in line with the research of Nurfadhilah (2017) and Apriyantini (2018) at Fatmawati General Hospital, which found that 2% of incomplete main diagnoses were still found, secondary diagnosis was 39% and main procedures were 5%. Likewise with Pepo and Yulia's (2015) research at Atmajaya Hospital, it was found that 59.1% of writing incomplete diagnoses on medical resumes and 49.9% of writing complete diagnoses on medical resumes. However, it is not in line with Munthe's (2018) research at Dharmais Hospital which found that filling in the primary diagnosis, secondary diagnosis, and action was 100% complete.

Writing the primary diagnosis that was not correct between medical records and medical resumes was 90.7%, while for secondary diagnosis writing was 30.2% and procedures/actions were 76.7%. This can occur due to the DPJP's inaccuracy in filling out medical resumes and also the lack of training that is evenly distributed to all DPJPs. As seen in the writing of the main diagnostic codes, many DPJPs input the C50 code in electronic medical records. However, in reality, the code cannot be inputted in the Vklaim system because it is not specific, so the input code should be selected between C50.1 to C50.9. Although filling out a medical resume is assisted by a doctor on duty, the discrepancy still occurs because the doctor on duty has never received training in filling out a medical resume according to the ICD which is based on INA CBG's. This was also mentioned by Indriwanto (2014) in his research which found that the writing of secondary diagnoses on medical resumes was not optimal so that when an audit was carried out there was an additional secondary diagnosis of 21.4%.

The casemix system has been running well, it can be seen from the improvement of the correct diagnosis code and procedures to represent the patient's clinical condition and the actual service costs incurred by the hospital. Therefore the hospital coder must be reliable and able to produce accurate, precise and consistent coding. Research conducted by Pongpirul et.al (2011) reports that several hospitals that rely on their income from payments from the DRG (Group-Related Diagnostics) system must survive by recruiting coders from other professions on a part-time basis because reliable and certified coders are not well distributed. Ideally, doctor clinically makes a relevant review of information on medical resumes for use by coders to generate appropriate diagnostic codes and procedures for filing claims. This is different from the results of research by Windari & Kristijono (2016) which reported that the inaccuracy of coding made by coders at Ungaran Hospital reached 25.33%. This is in accordance with the results of Farzandipour and Sheikhtaheri's research that the accuracy of coding inaccuracies in special hospitals was significantly higher than coding in general hospitals, namely 93.5% and 75.5% (Farzandipour et al., 2010).

The inaccuracy of coding carried out by the DPJP and the doctor on duty has led to differences in INA-CBG grouping results which have an impact on the difference in INA-CBGs rates. The secondary diagnosis mismatch of 30.23% which resulted in a procedure discrepancy of 76.7% in this study also contributed to the amount of INA-CBGs' tariff that the claim would be submitted to BPJS Kesehatan. The difference in tariff that occurs is Rp. 194,089,500.00 but managed to minimize by the coder and verifier team so that the difference that occurs is Rp. 13,287,900.00. Dharmais Cancer Hospital as a special cancer hospital has

coding rules governing the management of neoplasms in Permenkes No. 76 of 2016 concerning INA-CBG Guidelines in the implementation of JKN. In addition, the Ministry of Health Circular No. HK.03.03/MENKES/518/2016 concerning Guidelines for the Settlement of INA-CBG Claim Problems in the Implementation of JKN which have been socialized to all coders. The addition of a secondary diagnosis to a medical resume is generally carried out by an inhouse doctor who has never received training. Therefore, it still needs a medical verifier function performed by doctors to double-check medical resumes. The medical verifier has a very important role in examining the completeness of the contents of the medical resume, the suitability of diagnosis, support and therapy because it checks by looking at the SIMRS service billing and the status of the patient's medical record. Ideally, the medical resume is completely filled in from the inpatient room before being relegated to the medical record room.

Although the DPJP is already in accordance with writing the main diagnosis, the coder has been doing the determining of the main diagnostic code, considering that there are special coding rules that govern neoplasms in Permenkes No. 76 in 2016 and has not been completely socialized to the DPJP. The existence of a circular from the Ministry of Health regarding Guidelines for Solving Problems of INA-CBG Claims in the Implementation of JKN has been well socialized to all coders. This adds to the workload of the final coder, which removes the code (Omit code) if there is a code that does not comply with the circular. Although for hospital statistical data, all diseases and treatments received by patients should ideally be coded by the coder, this has not become the main focus of management because they still prioritize coding rules for the purposes of submitting claims to BPJS of Health. Quentin et al. (2013) stated in his research that good data regarding the quality of care in European hospitals is not only from good quality coding but also initiatives related to documenting good diagnoses and procedures as well. According to Lyold in Yuniati, coding inaccuracies were mostly caused by incorrect decisions in choosing which ones to code compared to errors in choosing the code (Yuniati, 2017). Whereas Jaworski stated that there was a complete medical resume, diagnosis code and proper procedure and in accordance with the type of service provided, so for the payment of claims this is the most crucial because this information will be sent to the paying party for review and payment (Jaworski et al., 2015).

CONCLUSION

Based on the results of the study "Analysis of the Completeness and Accuracy of Patient Medical Resume Coding to the Amount of INA-CBG's Claims with a case study on Breast Cancer Patients with Surgery at the Dharmais Cancer Hospital", it can be concluded as follows:

1) Input: In general, the DPJP, management, on duty doctors, case managers, coders, and verifiers already have good knowledge of the importance of a medical resume for BPJS claims. According to the DPJP, management, doctor on duty, case manager, coder and verifier, a complete medical resume must be seen in terms of quantity and quality, where the medical resume is filled in completely according to the medical record and also the coding of diagnosis and action according to the ICD based on INA CBG's. The completeness of the medical resume, both in terms of quantity and quality, will determine the amount of INA-CBG rates that will be claimed to BPJS Kesehatan. Thus the view between DPJP and management of Dharmais Cancer Hospital regarding complete medical resume is the same.

- 2) Process: Recording of medical resumes is carried out directly by a specialist doctor as the person in charge of the patient, but there are still incompleteness and inconsistencies in the contents of the medical resume with the medical record. The process of completing a medical resume carried out by the doctor in charge of the room is felt to be not optimal because the doctor in charge of the room does not understand how to determine the code of diagnosis and action according to the ICD based on INA CBG's. The coding carried out by the coder was quite good, namely based on the information in the medical resume and billing using the SIMRS facility. The coding refers to ICD 10 for diagnosis, ICD 9 CM for coding procedures, coding rules according to Permenkes 76 of 2016 and Circular of the Minister of Health. The examination carried out by the verifier is also quite maximal because the medical resume examination is done by reviewing the patient's medical record, but sometimes there are still some that are missed due to the long period of patient care.
- 3) Output: The highest number of incompleteness in filling out medical resume forms was secondary diagnosis of 30.23%, supporting examinations 27.91%, physical examinations and procedures/actions 23.26%, and identity of 4.65% of the total 43 cases reviewed. Inaccuracy rate of primary diagnosis coding 90,7%, procedure 76,7%, secondary diagnosis 30,2%. Incomplete and inaccurate coding affects the final INA-CBGs rate grouping results and is the cause of the difference in claims of Rp. 194,089,500.00 than it should be. However, with the re-inspection and repair process by coders and verifiers, the difference has been reduced to Rp. 13,287,900.00 from claims submitted to BPJS of Health.
- 4) Managerial Implications
 - a) Increasing the role of hospital leaders to facilitate the implementation of training for refresher efforts on filling and examining medical resumes along with coding of primary diagnoses, secondary diagnoses, and actions according to ICD 10 and ICD 9 CM based on INA CBG's:
 - b) The same perception/standardization regarding filling out medical resumes that are not based on medical science alone but also based on INA CBG's which is the system used in Indonesia;
 - c) Increasing the role of the medical committee and the quality committee in monitoring and evaluating not only the quantity of medical resume completeness but also the quantity of compliance with the main diagnoses, secondary diagnoses, and actions in making medical resumes;
 - d) Make the fulfillment of a complete and accurate medical resume as a performance appraisal that will affect the value of employee remuneration; and
 - e) The hospital continues to provide support in the SIMRS development process so that electronic medical resumes can be integrated with BPJS claim application.

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